

A feedback compensating apparatus for adjusting the working condition of a working machine of a working system adapted to process working portions of successive workpieces under control of a machine controller, which determines the working condition from an extraneous signal. The apparatus is used with the controller and a measuring device for measuring the dimensions of the processed working portions of the workpieces, and includes a device for obtaining dimensional data based on outputs of the measuring device during and/or after a working operation of the machine on each workpiece. The dimensional data include a dimensional error of the processed working portions, and a variable indicative of a tendency of change in the dimensional error. The apparatus further includes a device for determining the extraneous signal based on the dimensional data, and applying the signal to the machine controller to adjust the working condition of the machine. Also disclosed is a method of processing workpieces using the apparatus.